

# **EXHIBIT A – REDACTED**

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TWILIO INC.

**UNITED STATES DISTRICT COURT**

**NORTHERN DISTRICT OF CALIFORNIA – SAN JOSE**

TWILIO INC.,

Plaintiff,

vs.

TELESIGN CORPORATION,

Defendant.

Case No. 5:16-CV-06925-LHK

**PLAINTIFF TWILIO INC.'S  
DAMAGES CONTENTIONS PURSUANT  
TO L.P.R. 3-8**

**HIGHLY CONFIDENTIAL-ATTORNEYS'  
EYES ONLY**

1 Pursuant to the Federal Rules of Civil Procedure and Local Patent Rule 3-8 for the U.S.  
2 District Court for the Northern District of California, plaintiff Twilio, Inc. (“Twilio”) hereby  
3 submits its damages contentions.

4 Based on facts currently available to Twilio, Twilio does not intend to seek damages in  
5 the form of lost profits or price erosion for TeleSign’s infringement of U.S. Patent Nos.  
6 8,306,021, 8,837,465, and 8,755,376 (the “Asserted Patents”).

7 Twilio notes that discovery is in the early stages in this case, and Twilio reserves the  
8 right to amend, supplement, and/or update its damages contentions as identified herein. In  
9 particular, TeleSign alone is in possession of certain documents and information that Twilio  
10 would use in analyzing the proper theories and amounts of damages that are proper in this case.  
11 As one example, Twilio served Interrogatory No. 3 on TeleSign on March 21, 2017. That  
12 interrogatory asked TeleSign to “Describe all facts that relate to the determination of a  
13 reasonable royalty.” TeleSign obtained a six-week extension to answer that interrogatory. Yet  
14 TeleSign has failed to identify any facts in response to Twilio’s Interrogatory Number 3. *See*  
15 Exhibit A. Twilio notified TeleSign of this deficiency (among others in its interrogatory  
16 responses) in a letter dated June 11, 2017. *See* Exhibit B. To date, TeleSign has not  
17 supplemented its interrogatory response to provide any facts relating to the determination of a  
18 reasonable royalty.

19 As another example, Twilio served a Request for Production on TeleSign asking for “All  
20 documents related to the determination of a reasonable royalty.” *See* Twilio Request for  
21 Production No. 13. Yet TeleSign stated that it “will not produce documents in response to this  
22 request.” *See* Exhibit C (2017.05.01 TeleSign Responses to Twilio RFPs) (No. 13).

23 Further, only TeleSign has information on many factors relevant to the analysis of  
24 damages in this case, including documents relating to its comparable licenses, pricing strategy,  
25 pricing information, marketing analyses related to the accused and non-accused products,  
26 current and/or past customers of the accused and non-accused products, revenue attributable to  
27 the accused and non-accused products, per-unit revenue, cost, and profit information, TeleSign  
28 forecasts and projections relating to per-unit revenue, costs, and profits, competitive analyses,

1 and any available and viable non-infringing alternatives, for example.

2 Based on TeleSign's deficient discovery responses and document productions to date,  
3 including those identified later in these contentions, Twilio is lacking necessary information it  
4 needs to properly assess damages in this case.

5 Twilio reserves the right to amend, supplement, and/or update its damages contentions,  
6 theories, and computations based on discovery in this case, including fact and expert discovery,  
7 documents and information produced by TeleSign, TeleSign's responsive damages contentions,  
8 TeleSign's responses to written discovery (including its response to Interrogatory No. 3), third  
9 party information obtained through discovery, and expert opinions and analysis obtained during  
10 the course of the case.

11 In particular, Twilio reserves the right to supplement or amend these contentions once  
12 qualified experts have provided their opinions regarding the Asserted Patents, including the  
13 proper amount of damages for TeleSign's infringement of those patents. In particular, Twilio  
14 disclosed a damages expert to TeleSign in this case on June 9 and followed up with counsel for  
15 TeleSign on June 15. *See* Exhibit D. Twilio asked for TeleSign's consent to disclose its  
16 confidential information to the expert on an expedited basis, but neither TeleSign's lead counsel  
17 nor anyone else on TeleSign's counsel team would even respond to either of Twilio's emails.  
18 *Id.* Twilio contends that the opinion of its damages expert will be relevant to this analysis and  
19 Twilio is unable to disclose any confidential TeleSign information to its retained damages expert  
20 as of this date, due to TeleSign's failure to even respond to Twilio's email requests.

21 **I. CATEGORIES OF DAMAGES TWILIO INTENDS TO SEEK FOR TELESIGN'S**  
22 **PAST INFRINGEMENT AS OF THE JUDGMENT DATE**

23 Subject to the foregoing reservations, Twilio intends to seek "damages adequate to  
24 compensate for the infringement, but in no event less than a reasonable royalty for the use made  
25 of the invention by the infringer, together with interest and costs as fixed by the court" under 35  
26 U.S.C. § 284 and *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116,  
27 1119-20 (S.D.N.Y. 1970) to compensate for TeleSign's past infringement as of the date of  
28 judgment in this action. Twilio's analysis of the proper reasonable royalty, given the

1 information currently available to Twilio, is set forth below. The below analysis does not  
2 include prejudgment or post-judgment interest. Twilio intends to seek such interest and  
3 contends that the determination of prejudgment and post-judgment interest rates are a matter for  
4 the Court. Further, Twilio will seek an accounting from TeleSign relating to damages from the  
5 date of Twilio's opening damages expert report through trial and from trial through the date of  
6 final judgment.

7 Further, Twilio intends to seek that its damages be increased, up to triple their amount, as  
8 of the date that TeleSign became a willful infringer. *See, e.g., Halo Elecs., Inc. v. Pulse Elecs.,*  
9 *Inc.*, 579 U.S. \_\_ (2016). Based on the information Twilio currently possesses, Twilio contends  
10 that TeleSign has continued its infringing activities after receiving notice of the Asserted Patents  
11 and, therefore, such infringement is willful, entitling Twilio to the recovery of increased  
12 damages under 35 U.S.C. § 284. TeleSign became aware of the Asserted Patents and Twilio's  
13 products during its diligence in filing suit against Twilio. Furthermore, TeleSign's engineers had  
14 access to Twilio when TeleSign was a customer of Twilio. During that time, TeleSign's  
15 engineers were able to study Twilio's source code and the design of Twilio's products. For  
16 example, TeleSign's cofounder and Vice President of Product Strategy, Stacy Stubblefield, had  
17 a private Twilio account that was created in September of 2009. Through this account, Ms.  
18 Stubblefield gained access to Twilio's products. Ms. Stubblefield used the information that she  
19 learned from her Twilio account to develop TeleSign's products in order to compete with  
20 Twilio. After learning of Twilio's products, TeleSign designed competing products which  
21 closely match some of Twilio's products. As such, TeleSign's infringement of the Asserted  
22 Patents has been deliberate, flagrant, wanton, and constitutes willful infringement.

23 Twilio has served an interrogatory on TeleSign relating to its knowledge of the Asserted  
24 Patents (*see* Twilio Interrogatory No. 4), and TeleSign has failed to provide a complete answer  
25 to that interrogatory. *See* Exhibit A. Twilio also served an interrogatory on TeleSign relating to  
26 TeleSign's contention that it is not a willful infringer. *Id.* TeleSign has failed to provide a  
27 complete answer to that interrogatory. *Id.* TeleSign has informed Twilio that it intends to  
28 supplement these responses. Twilio reserves the right to amend and or supplement these

contentions based on additional information provided by TeleSign, any other information acquired during discovery, and any expert opinions.

## **II. CATEGORIES OF DAMAGES TWILIO INTENDS TO SEEK FOR TELESIGN'S ONGOING INFRINGEMENT AS OF THE JUDGMENT DATE**

### **A. Injunctive Relief**

For TeleSign's infringement as of the date of judgment in this action, Twilio intends to seek a permanent injunction. "The essential attribute of a patent grant is that it provides a right to exclude competitors from infringing the patent." *Acumed LLC v. Stryker Corp.*, 551 F.3d 1323, 1328 (Fed. Cir. 2008). "Without the right to obtain an injunction, the right to exclude granted to the patentee would only have a fraction of the value it was intended to have, and would no longer be as great an incentive to engage in the toils of scientific and technological research." *Honeywell Int'l, Inc. v. Universal Avionics Sys. Corp.*, 397 F. Supp. 2d 537, 547 (D. Del. 2005) (citation omitted). As such, the Patent Act provides courts the power to protect the patentee's right to exclude by granting injunctive relief, specifying that courts "may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent." 35 U.S.C. § 283.

The Supreme Court addressed and confirmed the long-standing test for the entry of permanent injunctions in patent cases in *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006). The eBay Court reaffirmed that an injunction requires the patentee showing:

- (1) that it has suffered an irreparable injury;
- (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury;
- (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and
- (4) that the public interest would not be disserved by a permanent injunction.

*Id.* at 391.

Chief Justice Roberts, writing in concurrence in *eBay*, explained that the Court's opinion

1 did not signify “a major departure from the long tradition of equity practice” or that district  
2 courts were now “writing on an entirely clean slate.” *Id.* at 395. He emphasized that “[f]rom at  
3 least the early 19th century, courts have granted injunctive relief upon a finding of infringement  
4 in the vast majority of patent cases,” a tradition “not surprising, given the difficulty of protecting  
5 a right to **exclude** through monetary remedies that allow an infringer to use an invention against  
6 the patentee’s wishes.” *Id.* (emphasis in original). In this regard, and in keeping with the  
7 principle that like cases should be decided alike, Justice Roberts noted that “a page of history is  
8 worth a volume of logic” in applying the traditional principles of equity to grant injunctions  
9 when patent infringement is found. *Id.*

10 Agreeing, Justice Kennedy also in concurrence went further to circumscribe the two  
11 scenarios where the equities may balance against an injunction. First, an injunction may be  
12 unwarranted when it serves as nothing but “a bargaining tool to charge exorbitant fees to  
13 companies that seek to buy licenses to practice the patent.” *Id.* at 396. That is, a company using  
14 a patent “not as a basis for producing and selling goods but, instead, primarily for obtaining  
15 licensing fees,” will rarely prove that a remedy at law is inadequate. *Id.* Second, “[w]hen the  
16 patented invention is but a small component of the product the companies seek to produce and  
17 the threat of an injunction is employed simply for undue leverage in negotiations, legal damages  
18 may well be sufficient...and an injunction may not serve the public interest.” *Id.* at 396-97.

19 In applying the holding and reasoning from *eBay*, the Federal Circuit has noted that “the  
20 courts have a long history of remedying trespass on property rights—including patent rights—by  
21 removing the trespasser.” *Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1338 (Fed. Cir.  
22 2013). “Patent property rights are especially difficult to protect with solely monetary relief  
23 because a calculating infringer may thus decide to risk a delayed payment to obtain use of  
24 valuable property without the owner’s permission.” *Id.* “This wisdom is particularly apt in  
25 traditional cases, such as this, where the patentee and the adjudged infringer both practice the  
26 patented technology.” *Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1150 (Fed. Cir.  
27 2011). Thus, “[d]irect competition in the same market is certainly one factor suggesting  
28 strongly the potential for irreparable harm without enforcement of the right to exclude” and

1 “[f]acts relating to the nature of the competition between the parties are therefore undoubtedly []  
2 relevant to the irreparable harm inquiry.” *Asetek Danmark A/S v. CMI USA, Inc.*, No. 13-cv-  
3 457-JST (N.D. Cal. Sept. 22, 2015).

4 Twilio contends that (1) TeleSign’s infringement has caused Twilio irreparable injury  
5 and will continue to cause such injury if permitted to continue; (2) monetary damages are  
6 inadequate to compensate for that injury; (3) considering the balance of hardships between  
7 Twilio and TeleSign, a remedy in equity is warranted; and (4) that the public interest would not  
8 be disserved by a permanent injunction in this case. However, Twilio contends that permanent  
9 injunctions are not covered by Local Patent Rule 3-8 and therefore no additional detail regarding  
10 Twilio’s contentions concerning a permanent injunction are required at this time.

11 **B. *Monetary Relief, in the Alternative***

12  
13 In the alternative, should the Court not grant a permanent injunction, Twilio intends to  
14 seek a reasonable royalty “together with interest and costs as fixed by the court” for TeleSign’s  
15 infringement going forward as of the date of judgment in this case. *See* 35 U.S.C. § 284.  
16 Twilio’s analysis of the proper reasonable royalty, given the information currently available to  
17 Twilio, is set forth below. The below analysis does not include prejudgment or post-judgment  
18 interest. Twilio intends to seek such interest and contends that the determination of prejudgment  
19 and post-judgment interest rates are a matter for the Court.

20 Further, Twilio intends to seek that its post-judgment damages be increased, up to triple  
21 their amount, as of the date that TeleSign became a willful infringer. *See, e.g., Halo Elecs., Inc.*  
22 *v. Pulse Elecs., Inc.*, 579 U.S. \_\_ (2016). Based on the information Twilio currently possesses,  
23 Twilio contends that TeleSign has continued its infringing activities after receiving notice of the  
24 Asserted Patents and, therefore, such infringement is willful, entitling Twilio to the recovery of  
25 increased damages under 35 U.S.C. § 284. TeleSign became aware of the Asserted Patents and  
26 Twilio’s products during its diligence in filing suit against Twilio. Furthermore, TeleSign’s  
27 engineers had access to Twilio when TeleSign was a customer of Twilio. During that time,  
28 TeleSign’s engineers were able to study Twilio’s source code and the design of Twilio’s



1 products. For example, TeleSign's cofounder and Vice President of Product Strategy, Stacy  
 2 Stubblefield, had a private Twilio account that was created in September of 2009. Through this  
 3 account, Ms. Stubblefield gained access to Twilio's products. Ms. Stubblefield used the  
 4 information that she learned from her Twilio account to develop TeleSign's products in order to  
 5 compete with Twilio. After learning of Twilio's products, TeleSign designed competing  
 6 products which closely match some of Twilio's products. As such, TeleSign's infringement of  
 7 the Asserted Patents has been deliberate, flagrant, wanton, and constitutes willful infringement.

8 Twilio has served an interrogatory on TeleSign relating to its knowledge of the Asserted  
 9 Patents (*see* Twilio Interrogatory No. 4), and TeleSign has failed to provide a complete answer  
 10 to that interrogatory. *See* Exhibit A. Twilio also served an interrogatory on TeleSign relating to  
 11 TeleSign's contention that it is not a willful infringer. *Id.* TeleSign has failed to provide a  
 12 complete answer to that interrogatory. *Id.* TeleSign has informed Twilio that it intends to  
 13 supplement these responses.

14 Twilio has also served several Requests for Production on TeleSign relating to  
 15 TeleSign's knowledge of the patents and its pre-suit actions with respect to Twilio. For  
 16 example, TeleSign has agreed to "conduct a reasonable search and produce non-privileged  
 17 documents evidencing Stacy Stubblefield's analysis of the relevant Twilio products." *See*  
 18 Exhibit C (2017.05.01 TeleSign Responses to Twilio's First Set of RFPs) (No. 1). Further,  
 19 TeleSign has agreed to "conduct a reasonable search and produce non-privileged documents  
 20 evidencing analysis of the relevant Twilio products." *Id.* at RFP No. 5.

21 Twilio reserves the right to amend and or supplement these contentions based on  
 22 additional information provided by TeleSign, any other information acquired during discovery,  
 23 and any expert opinions.

### 24 **III. TWILIO'S FACTUAL SUPPORT FOR AND COMPUTATION OF DAMAGES** 25 **IN AN AMOUNT NO LESS THAN A REASONABLE ROYALTY**

26 Twilio's preliminary analysis of the proper reasonable royalty for TeleSign's  
 27 infringement of the Asserted Patents in this case under the *Georgia-Pacific* factors is set forth  
 28 below. Twilio reserves the right to utilize any facts, analysis, or documents cited under a

particular factor below for other factors as well.

**A. Georgia-Pacific Factor 1: “The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty”**

Twilio contends that expert witnesses in this case will analyze the [REDACTED] and may provide an opinion as to whether that agreement is related to comparable technology to the patents-in-suit and whether the agreement may be relevant to the analysis of the hypothetical negotiation.

Twilio reserves its right to amend and supplement these contentions based on any information obtained during discovery and expert opinions relating to this factor.

**B. Georgia-Pacific Factor 2: “The rates paid by the licensee for the use of other patents comparable to the patent in suit”**

As of the date of these contentions, TeleSign has not produced any license agreements. Thus Twilio is not able to determine at this stage in the case what rate, if any, TeleSign has paid for the use of other patents comparable to the Asserted Patents. Further, TeleSign has a patent portfolio of its own and Twilio is not in possession of any license agreements TeleSign has entered into concerning its own patents.

Based on Twilio’s initial investigation to date, it appears that TeleSign has a number of partnerships with third parties, including Comodo; [REDACTED]; Deepnet Security; [REDACTED] RSA; [REDACTED] Mobile Mentor; [REDACTED] [REDACTED] BahavioSec; and Orange. Twilio is not in possession of further information regarding these partnerships, including any licensing or technology transfer / sharing agreements that may have been executed, services / products

1 received or provided, and any related financial provisions. This information may affect the  
2 analysis of a reasonable royalty under this factor.

3 Should TeleSign produce any license or technology transfer / sharing agreements  
4 including technologies comparable to the patented technology or should any such agreements  
5 otherwise become available during discovery, Twilio reserves the right to amend and  
6 supplement these contentions. However, given that this information is solely in the possession  
7 of TeleSign, Twilio is unable to disclose, at this stage in the case, how this factor would affect a  
8 reasonable royalty for the Asserted Patents.

9 Twilio reserves its right to amend and supplement these contentions based on any  
10 information obtained during discovery and expert opinions relating to this factor.

11 **C. *Georgia-Pacific Factor 3: “The nature and scope of the license, as exclusive or***  
12 ***non-exclusive; or as restricted or non-restricted in terms of territory or with***  
13 ***respect to whom the manufactured product may be sold”***

14 As part of a hypothetical negotiation, Twilio would offer TeleSign a non-exclusive, U.S.  
15 license for rights to the Asserted Patents. Such non-exclusive rights would provide TeleSign the  
16 necessary clearance to provide its customers with the Accused Products.

17 Twilio reserves its right to amend and supplement these contentions based on any  
18 information obtained during discovery and expert opinions relating to this factor.

19 **D. *Georgia-Pacific Factor 4: “The licensor’s established policy and marketing***  
20 ***program to maintain his patent monopoly by not licensing others to use the***  
21 ***invention or by granting licenses under special conditions designed to preserve***  
22 ***that monopoly”***

23 From an economic perspective, if the patent holder has “an established policy ... to  
24 maintain his patent monopoly by not licensing others,” that presumably reflects a belief by the  
25 patent holder that it can earn more profits by exploiting its patent itself than by licensing it to  
26 others. The presence of such a policy would suggest a somewhat higher reasonable royalty,  
27 holding all other factors constant.

28 Twilio does not have an established policy or marketing program relating to the licensing  
of the Asserted Patents.

1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED] Twilio contends that fact discovery is  
7 ongoing and expert discovery has not yet begun. Twilio contends that expert witnesses in this  
8 case will analyze the [REDACTED] and may provide an opinion as to whether that  
9 agreement is related to comparable technology to the patents-in-suit and whether the agreement  
10 may be relevant to the analysis of the hypothetical negotiation.

11 Twilio reserves its right to amend and supplement these contentions based on any  
12 information obtained during discovery and expert opinions relating to this factor.

13 **E. *Georgia-Pacific Factor 5: “The commercial relationship between the licensor***  
14 ***and licensee, such as, whether they are competitors in the same territory in the***  
15 ***same line of business; or whether they are inventor and promoter”***

16 As an economic matter, one would expect that, other things equal, a patent holder would  
17 charge higher royalty rates to a competitor than it would charge to a non-competitor. To the  
18 extent Twilio and TeleSign are competitors in the market relevant to the Asserted Patents, this  
19 factor would tend to have an upward impact on the outcome of the hypothetical negotiation.

20 TeleSign has made numerous statements on the record relating to the competition  
21 between the parties. For example, in co-pending litigation between the parties, TeleSign alleged  
22 that Twilio’s marketing “is having a devastating effect on TeleSign’s business,” “TeleSign has  
23 been forced into a price war with Twilio,” and “TeleSign’s entire sales strategy and growth plans  
24 have been disrupted by Twilio’s infringement.” Case No. 2:15-cv-03240-PSG-SS, Dkt. 21  
25 (Aug. 5, 2015) at 2-3. TeleSign alleged that Twilio offers its technology “to the same customers  
26 that TeleSign is targeting.” *Id.* at 3. Further, TeleSign stated that “TeleSign and Twilio directly  
27 compete with one another for customers, and TeleSign is losing sales that could result in long-  
28 term customer relationships.” *Id.* at 12. Further, TeleSign alleged:

TeleSign and Twilio market their products using the same channels, such as offering online information and demonstrations, attending conferences, and marketing to software- and website developers directly (e.g., using Twitter accounts), and through an enterprise-sales model. TeleSign and Twilio regularly meet with the same customers and potential customers on sales calls and during in-person meetings.

*Id.* Further, TeleSign alleged “TeleSign and Twilio will be competing aggressively for virtually all new customers for phone verification technology.” *Id.* at 15.

In April 2017, TeleSign launched new product features and a press campaign targeted at Twilio. *See* D.I. 66-5. [REDACTED]

Twilio contends that the following documents may be relevant to the analysis under this factor: TLS\_0006792, TLS\_00008679, TLS\_00015401, TLS\_00015415, TLS\_00015416, TLS\_00015430, TLS\_00015474, TLS\_00015481, TLS\_00015483, TLS\_00015484, TLS\_00015501, TLS\_00015503, TLS\_00015541, TLS\_00015542, TLS\_00020421, TLS\_00020422, TLS\_00020423, TLS\_00020426, TLS\_00020629, TLS\_00009232, TLS\_00009308, TLS\_00009335, TLS\_00009514, TLS\_00012085, TLS\_00012210, TLS\_00012317, TLS\_00012507.

TeleSign has refused to provide a complete answer to Twilio regarding the nature of the competition between Twilio and TeleSign. *See* Exhibit A (TeleSign’s Response to Interrogatories) (No. 6); Exhibit B (June 11, 2017 letter from Wayne Stacy to TeleSign). TeleSign has informed Twilio that it intends to supplement this interrogatory response.

Twilio has also served several Requests for Production on TeleSign relating to competition between the parties. For example, TeleSign agreed to “produce documents evidencing competition analysis of the Accused Products and the relevant Twilio products.” *See* Exhibit C (2017.05.01 TeleSign Responses to Twilio’s First Set of RFPs) (No. 7 and 16).

Twilio reserves the right to amend and/or supplement these contentions based on any further information TeleSign produces relating to the competition between the parties, information relating to this factor otherwise obtained during discovery, and expert opinions relating to this factor. For example, records relating to head-to-head competition, market

1 analyses or studies, customer feedback, and any pricing discounts by either party to win work  
2 may be relevant to this analysis.

3 **F. *Georgia-Pacific Factor 6: “The effect of selling the patented specialty in***  
4 ***promoting sales of other products of the licensee; the existing value of the***  
5 ***invention to the licensor as a generator of sales of his non-patented items; and***  
6 ***the extent of such derivative or convoyed sales”***

7 In general, convoyed sales involve sales of related products, which flow or would be  
8 expected to flow to the licensee from the right to manufacture, use, or sell the patented  
9 invention. From an economic perspective, a license for a product that is expected to generate  
10 substantial “convoyed sales” is more valuable than a license that is not. This suggests that the  
11 reasonable royalty would be higher for a licensee that expects to generate such convoyed sales.

12 In addition to the Accused Products at issue in this case, TeleSign offers other products  
13 and services that Twilio does not allege are covered by the Asserted Patents. For example,  
14 Twilio does not accuse TeleSign’s Score and Phone ID products from infringing the Asserted  
15 Patents. TeleSign’s acquisition and retention of customers through the provision of the Accused  
16 Products may help TeleSign sell non-accused products such as Score and Phone ID. TeleSign  
17 admits that there are significant synergies among its products. For example, in co-pending  
18 litigation between the parties, TeleSign stated “the more customers TeleSign has, the more  
19 traffic it can process and analyze, which adds to the value and effectiveness of PhoneID.” Case  
20 No. 2:15-cv-03240-PSG-SS, Dkt. 21 (Aug. 5, 2015) at 14. Further, TeleSign stated that it  
21 “cross-sells” its other products with its PhoneID product. *Id.* at 15 (“TeleSign will lose sales of  
22 technology that it cross-sells with PhoneID. . .”). Twilio contends that TeleSign’s sales of the  
23 Accused Products, and infringement of the Asserted Patents, enable TeleSign to sell more of its  
24 non-accused products such as Score and Phone ID. All else being equal, this factor makes a  
25 license to the Asserted Patents more valuable.

26 Twilio contends that additional information concerning TeleSign’s non-accused products  
27 may be relevant to this analysis. For example, information concerning the operation,  
28 functionality, marketing, target customers, revenue, costs, profits, and usage metrics for non-

1 accused products from 2005 to present may be relevant to an analysis of the contribution of the  
 2 patented technology of the Asserted Patents. Per-unit financial information such as revenues,  
 3 costs, and profits, on a line-item basis, for non-accused products from 2005 to present may be  
 4 relevant to this analysis. Further, business plans, marketing plans, and target customer plans or  
 5 analyses for both the accused and non-accused products may be relevant to the analysis under  
 6 this factor. TeleSign is in sole possession of information relating to its sales and marketing  
 7 strategies and information relating to cross-selling of its products.

8 Further, TeleSign recently launched self-service access to its communications APIs. *See*  
 9 [https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-](https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-communications-apis/)  
 10 [communications-apis/](https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-communications-apis/). Twilio contends that information relating to this new service, including  
 11 marketing and promotion materials, information relating to any cross-selling or synergistic  
 12 efforts among TeleSign products, usage metrics, actual and projected per-unit revenue, cost, and  
 13 profit information, and analyses concerning target market and target customers may be relevant  
 14 to the analysis under this factor.

15 Twilio contends that the following documents may be relevant to the analysis under this  
 16 factor: TLS\_00015671, TLS\_00015673, TLS\_00015720, TLS\_00015734, TLS\_00015746,  
 17 TLS\_00015793, TLS\_00015840, TLS\_00004627, TLS\_00008659, TLS\_00008665,  
 18 TLS\_00013055, TLS\_00014324, TLS\_00014954, TLS\_00015626, TLS\_00015627,  
 19 TLS\_00012799, TLS\_00012805, TLS\_00012871, TLS\_00012931, TLS\_00012993,  
 20 TLS\_00013489, TLS\_00013921, TLS\_00001354, TLS\_00001963, TLS\_00002018,  
 21 TLS\_00002114, TLS\_00004540, TLS\_00001117, TLS\_00001127, TLS\_0002140.

22 Twilio reserves its right to amend and supplement these contentions based on any  
 23 information obtained during discovery and expert opinions relating to this factor.

24 **G. *Georgia-Pacific Factor 7: “The duration of patent and the term of license”***

25 A license resulting from the hypothetical negotiation would have been for the unexpired  
 26 term of the Patents-in-Suit. The ‘021 Patent issued on November 6, 2012. The ‘376 Patent  
 27 issued June 17, 2014. The ‘465 Patent issued September 16, 2014. The damages period for  
 28



each patent begins no later than the issuance dates and extends through patent expiration. Significant term remains on the Asserted Patents.

Twilio contends that information concerning TeleSign's incremental margins on the Accused Products may be relevant to the analysis under this factor. For example, Twilio contends that TeleSign's incremental margins on the Accused Products increase with each message that is sent. Because significant life is remaining on the Asserted Patents, the parties to the hypothetical negotiation would have known that TeleSign's incremental margins would have increased through the life of the Asserted Patents.

**H. *Georgia-Pacific Factor 8: "The established profitability of the product made under the patent, its commercial success and its current popularity"***

Twilio is a leading cloud communications company founded in San Francisco by software developers Jeff Lawson, Evan Cooke, and John Wolthuis. As software developers, Twilio's founders experienced the difficulty of deeply integrating communications into software applications that was caused by the complexity of tapping into the legacy world of telephony. This difficulty in turn prevented rapid iteration and was a barrier to innovation. So, Jeff Lawson and his co-founders built Twilio, a revolutionary telecommunications platform that software developers can leverage to more quickly and easily integrate communications into their software applications. This revolutionary design freed software developers from having to manage the complex legacy telephony system and communications infrastructure so they can do what they do best—iterate and innovate. Twilio's vision has been very successful. It went public in 2016, has a market cap of over \$1 Billion, and employs over 600 people. Twilio has been awarded over 45 patents. Three of these patents are asserted in this suit. Each of the three asserted patents solves a problem of bridging software developers and telephony communication.

A sample of Twilio customer stories are available at [https://customers.twilio.com/?\\_ga=2.42457325.919014724.1497628536-180667087.1495751074](https://customers.twilio.com/?_ga=2.42457325.919014724.1497628536-180667087.1495751074). Additional information about the success of Twilio's products is available in Twilio's SEC filings.



1 [REDACTED]  
2 [REDACTED] [REDACTED]  
3 [REDACTED]  
4 [REDACTED] However, TeleSign's production does not include  
5 per-unit revenue, cost, or profitability data; nor does it include usage metrics such as number of  
6 uses of each Accused Product per month. Twilio contends that this information, for example,  
7 may be relevant to the proper analysis of damages under this factor.

8 Based on Twilio's initial investigation to date, TeleSign introduced REST APIs to  
9 substitute its previous SOAP-based architecture in February 2012. *See, e.g.,*  
10 <https://www.telesign.com/blog/post/restful-apis/>. TeleSign stated in a blog post as of that date  
11 that "Today all of our customers access our APIs via SOAP and we've definitely heard that  
12 folks want us to provide our APIs in an alternative form since almost all Web Services today use  
13 REST." Information concerning TeleSign's analysis of the switch from SOAP to REST, the  
14 factors involved in that decision, any financial analyses or presentations concerning that  
15 decision, any customer or developer feedback to TeleSign concerning the SOAP interface and  
16 any requests to switch to REST or discussions concerning a potential switch may be relevant to  
17 the analysis under this factor. Further, any information concerning the impact of this switch on  
18 TeleSign's usage metrics for the Accused Products, including number of message and number of  
19 subscribers per month for each Accused Product before and after the transition, per unit revenue,  
20 per unit cost and profitability data before and after the transition may be relevant to the analysis  
21 under this factor. Further, any customer / developer feedback concerning the switch may be  
22 relevant to the analysis under this factor. Further, any projections or forecasts concerning how  
23 the switch from SOAP to REST would affect TeleSign, sales, costs, and profitability of the  
24 Accused Products may be relevant to the analysis under this factor.

25 REST provides several benefits over SOAP. For example, SOAP was designed to  
26 support a wide array of applications. As such, its flexibility creates complexity, overhead, and  
27 user unfriendliness in its design. SOAP is also limited to the use of XML. As a result, REST is  
28

1 not as flexible as SOAP and is not appropriate for all applications. However, when REST can  
2 be used and is appropriate, it provides a number of benefits over SOAP.

3 Further, REST provides its own form of flexibility. For example, while SOAP is based  
4 on a number of standards and is a protocol requiring strict adherence in order to avoid errors,  
5 REST is more of an architecture that provides flexibility in how the API is designed. REST  
6 requests can be encoded in URIs that are sent to servers as stateless requests--similar to how  
7 HTTP requests are made.

8 SOAP requests are not encoded into the URI but must be delivered as objects in the body  
9 of a request. As long as the request can be made into a URI and kept stateless, REST can be  
10 used to avoid the complexity of specifying a SOAP object format.

11 TeleSign recognized the benefits of REST over SOAP. For example, TeleSign identified  
12 in February 2012 that:

13  
14 There are a few advantages to this method: (1) The secret information is  
15 never passed between each party during the transaction; (2) Because each  
16 party has a copy of the secret key, the sender and recipient are  
17 independently able to create the "Authorization" token. As long as the  
18 token is created in the same way on each side the authorization of the  
transaction will succeed; (3) Because the authorization token contains a  
hash of not only the API Key but the transaction as well, the recipient can  
be assured that both the transaction is properly authenticated and that it  
hasn't been modified in transit.

19 See <https://www.telesign.com/blog/post/restful-apis/>.

20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]  
23 [REDACTED]  
24 Further, TeleSign recently launched a new self-service access to its communications  
25 APIs. The self-service feature is marketed by TeleSign as being user-friendly and not complex.  
26 The user-friendliness and lack of complexity is enabled by the REST architecture.  
27  
28

1 Twilio contends the following documents may be relevant to the analysis under this  
2 factor: TLS\_00008665, TLS\_00015598, TLS\_00004627, TLS\_00008659, TLS\_00008665,  
3 TLS\_00013055, TLS\_00014324, TLS\_00014954, TLS\_00015626, TLS\_00015627,  
4 TLS\_00012799, TLS\_00012805, TLS\_00012871, TLS\_00012931, TLS\_00012993,  
5 TLS\_00013489, TLS\_00013921, TLS\_0002141.

6 Twilio contends that monthly or quarterly unit price, unit sales, revenue, and unit cost  
7 information (including detailed line items of what comprises unit costs) per customer from 2005  
8 to present for each Accused Product may be relevant to the analysis under this factor. To the  
9 extent that any Accused Products were modified and/or updated over time, Twilio contends the  
10 same information for predecessor products may be relevant to this analysis as well. Further,  
11 monthly or quarterly profitability (e.g., revenue; costs of goods sold (COGS); selling, general,  
12 and administrative expenses (SG&A); and research and development expenses (R&D), etc.) and  
13 other financial information related to each Accused Product and its predecessors from 2005 to  
14 present may be relevant to this analysis. Further, Twilio contends that information concerning  
15 TeleSign's incremental margins on the Accused Products may be relevant to the analysis under  
16 this factor. For example, Twilio contends that TeleSign's incremental margins on the Accused  
17 Products increase with each message that is sent. Further, technical specifications and features  
18 for each Accused Product and any predecessor may be relevant to this analysis.

19 For example, TeleSign produced limited information relating to revenues, costs, and  
20 profitability of the Accused Products at TLS\_00008665. However, this information is  
21 incomplete at least because it does not include any data earlier than January 2012. TeleSign  
22 switched from a SOAP architecture to a REST architecture for the Accused Products on or  
23 around February 2012. Thus, financial information that pre-dates this switch would enable  
24 Twilio to analyze how the change in technology affected TeleSign's financials. Further, the  
25 revenue, cost, and profit data is not broken down by line item or broken down on a per-unit  
26 basis. For example, Twilio contends that per-unit costs and per-unit revenues may be relevant to  
27 the analysis under this factor.  
28

1 Further, Twilio contends that information concerning quantities of each Accused Product  
2 sold by TeleSign over time may be relevant to this analysis. For example, the number of  
3 messages sent per month for each Accused Product and the number of subscribers per month for  
4 each Accused Product may be relevant to this analysis. Twilio has not located such information  
5 in TeleSign's document production, and such information is solely in the possession of  
6 TeleSign.

7 Further, TeleSign recently launched self-service access to its communications APIs. *See*  
8 [https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-](https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-communications-apis/)  
9 [communications-apis/](https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-communications-apis/). Twilio contends that information relating to this new service, including  
10 marketing and promotion materials, information relating to any cross-selling or synergistic  
11 efforts among TeleSign products, usage metrics, actual and projected per-unit revenue, cost, and  
12 profit information, projected and actual quantities sold (e.g., number of messages per month),  
13 and analyses concerning target market and target customers may be relevant to the analysis  
14 under this factor.

15 Twilio contends that additional information concerning TeleSign's non-accused products  
16 may be relevant to this analysis. For example, information concerning the operation,  
17 functionality, marketing, target customers, revenue, costs, profits, and usage metrics for non-  
18 accused products from 2005 to present may be relevant to an analysis of the contribution of the  
19 patented technology of the Asserted Patents. Per-unit financial information such as revenues,  
20 costs, and profits, on a line-item basis, for non-accused products from 2005 to present may be  
21 relevant to this analysis. Further, business plans, marketing plans, and target customer plans or  
22 analyses for both the accused and non-accused products may be relevant to the analysis under  
23 this factor.

24 Based on Twilio's initial investigation to date, it appears that TeleSign has a number of  
25 partnerships with third parties, including Comodo; [REDACTED] Deepnet Security; [REDACTED] RSA;  
26 [REDACTED] Mobile Mentor; [REDACTED] [REDACTED] BahavioSec; and Orange. Twilio is not in  
27 possession of further information regarding these partnerships, including any licensing or  
28 technology transfer / sharing agreements that may have been executed, services / products

1 received or provided, and any related financial provisions. This information may affect the  
2 analysis of a reasonable royalty under this factor.

3 Further, documents relating to Twilio's own profitability and pricing relating to its  
4 products that practice the claims may be relevant under this analysis. Those documents will be  
5 forthcoming according to the discovery schedule. In particular, because TeleSign took a lengthy  
6 extension on written discovery, Twilio too has an extension and its financial production has not  
7 become due yet. Twilio is in the process of searching its relevant financials and its related  
8 document production will be forthcoming.

9 Twilio reserves its right to amend and supplement these contentions based on any  
10 information obtained during discovery and expert opinions relating to this factor.

- 11 **I. *Georgia-Pacific Factor 9: "The utility and advantages of patent property over***  
12 ***old modes and devices, if any, that had been used for working out similar***  
13 ***results"***
- 14 **J. *Georgia-Pacific Factor 10: "The nature of the patented invention; the***  
15 ***character of the commercial embodiment of it as owned and produced by the***  
16 ***licensor; and the benefit of those who have used the invention"***

17 *Georgia-Pacific* Factor Nos. 9 and 10 are often considered together because of their  
18 similar nature. *Georgia-Pacific* Factor Nos. 9 and 10 both relate to the advantages conveyed due  
19 to the use of the patented invention and the related benefits enjoyed by the user of the patented  
20 invention over alternative means of achieving similar results.

21 The Asserted Patents address a specific problem relating to bridging software developers  
22 and telephony communication. D.I. 1-1 at 1:30-59. In the shared specification, the inventors  
23 explain that the problem arises because of the modern combination of apps with the often older,  
24 complex telephony network systems. D.I. 1-4 at 39-46. While developments like VoIP and  
25 commodity hardware make it possible at a high-level to create programs that work with  
26 telephony networks, the old telephony environment presents significant problems. *Id.* at 30-34.  
27 As explained by the inventors, developing even the simplest app to work with complicated  
28 telephony network components and protocols requires developers to customize their apps to  
work with voice networking codecs, to use specialty hardware and software to bridge the

1 application server to the telephony network components. *Id.* at 33-46. The app developers also  
2 need to learn and implement the languages specific to the particular networks the app would  
3 need to connect to. *Id.* According to the inventors, the problems are compounded if the app  
4 developer wants the ability to connect to and work with multiple, disparate networks. The  
5 inventors of the Asserted Patents sought to provide solutions to the problem by bridging the gap  
6 between the developer and the legacy world of telephony communications. *Id.* at 1:30-59.

7 One solution to the problems presented as a result of the intersection of app technology  
8 and telephony networks is recited in claim 13 of the '021 Patent. Claim 13 of the '021 Patent is  
9 directed to a specific improvement of the interaction between application servers and telephony  
10 network components without the need for custom app programming and hardware necessary for  
11 communication between each telephony and the app server. More specifically, claim 13 recites  
12 a particular combination of elements to link app servers to telephony sessions on the telephony  
13 network. D.I. 1-1 at cl. 13. The claimed method uses a Uniform Resource Identifier (URI) in a  
14 specific way to link the telephony session with the app server and to access telephony network  
15 functionality ("creating call router resources..., wherein the call router resources are accessible  
16 by outside devices at an addressable Uniform Resource Identifier (URI)," "mapping a telephony  
17 session to the URI, the URI being associated with the application server"). *Id.* The claimed  
18 Application Programming Interface facilitates communication between the app server and  
19 telephony network components communication ("creating call router resources accessible  
20 through a call router Application Programming Interface (API)," "receiving an API request from  
21 the application server for interaction with a resource"). *Id.* The state information embedded in  
22 the request to an app server provides the information needed to allow the app server to process  
23 and understand the original telephony request ("embedding state information of the telephony  
24 session in the request," "receiving from the application server a response comprising telephony  
25 instructions for sequential processing"). D.I. 1-1 at 4:31-5:46, cl. 1 ("embedding state  
26 information of the telephony session in the request"). The claimed use of embedded state  
27 information, URI, and API is a unique combination of steps that makes it possible to bridge the  
28

1 gap between app server technology and telephony technology without the need for custom  
2 systems and interfaces—the problem identified in the specification. *Id.* at 1:30-59.

3 Based on Twilio’s initial investigation to date, TeleSign introduced REST APIs to  
4 substitute its previous SOAP-based architecture in February 2012. *See, e.g.,*  
5 <https://www.telesign.com/blog/post/restful-apis/>. TeleSign stated in a blog post as of that date  
6 that “Today all of our customers access our APIs via SOAP and we’ve definitely heard that  
7 folks want us to provide our APIs in an alternative form since almost all Web Services today use  
8 REST.” Information concerning TeleSign’s analysis of the switch from SOAP to REST, the  
9 factors involved in that decision, any financial analyses or presentations concerning that  
10 decision, any customer or developer feedback to TeleSign concerning the SOAP interface and  
11 any requests to switch to REST or discussions concerning a potential switch may be relevant to  
12 the analysis under this factor. Further, any information concerning the impact of this switch on  
13 TeleSign’s usage metrics for the Accused Products, including number of message and number of  
14 subscribers per month for each Accused Product before and after the transition, per unit revenue,  
15 per unit cost and profitability data before and after the transition may be relevant to the analysis  
16 under this factor. Further, any customer / developer feedback concerning the switch may be  
17 relevant to the analysis under this factor. Further, any projections or forecasts concerning how  
18 the switch from SOAP to REST would affect TeleSign, sales, costs, and profitability of the  
19 Accused Products may be relevant to the analysis under this factor.

20 REST provides several benefits over SOAP. For example, SOAP was designed to  
21 support a wide array of applications. As such, its flexibility creates complexity, overhead, and  
22 user unfriendliness in its design. SOAP is also limited to the use of XML. As a result, REST is  
23 not as flexible as SOAP and is not appropriate for all applications. However, when REST can  
24 be used and is appropriate, it provides a number of benefits over SOAP.

25 Further, REST provides its own form of flexibility. For example, while SOAP is based  
26 on a number of standards and is a protocol requiring strict adherence in order to avoid errors,  
27 REST is more of an architecture that provides flexibility in how the API is designed. REST  
28



1 requests can be encoded in URIs that are sent to servers as stateless requests--similar to how  
2 HTTP requests are made.

3 SOAP requests are not encoded into the URI but must be delivered as objects in the body  
4 of a request. As long as the request can be made into a URI and kept stateless, REST can be  
5 used to avoid the complexity of specifying a SOAP object format.

6 TeleSign recognized the benefits of REST over SOAP. For example, TeleSign identified  
7 in February 2012 that:

8  
9 There are a few advantages to this method: (1) The secret information is  
10 never passed between each party during the transaction; (2) Because each  
11 party has a copy of the secret key, the sender and recipient are  
12 independently able to create the "Authorization" token. As long as the  
13 token is created in the same way on each side the authorization of the  
14 transaction will succeed; (3) Because the authorization token contains a  
15 hash of not only the API Key but the transaction as well, the recipient can  
16 be assured that both the transaction is properly authenticated and that it  
17 hasn't been modified in transit.

18 See <https://www.telesign.com/blog/post/restful-apis/>.

19 Further, TeleSign recently launched a new self-service access to its communications  
20 APIs. [https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-](https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-communications-apis/)  
21 [communications-apis/](https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-communications-apis/). The self-service feature is marketed by TeleSign as being user-friendly  
22 and not complex. The user-friendliness and lack of complexity is enabled by the REST  
23 architecture. Twilio contends that information relating to this new service, including marketing  
24 and promotion materials, information relating to any cross-selling or synergistic efforts among  
25 TeleSign products, usage metrics, actual and projected per-unit revenue, cost, and profit  
26 information, projected and actual quantities sold (e.g., number of messages per month), and  
27  
28



1 analyses concerning target market and target customers may be relevant to the analysis under  
2 this factor.

3 Twilio is currently unaware of any acceptable, non-infringing alternatives or a design-  
4 around available to TeleSign which would provide the same or similar benefits of subject matter  
5 claimed in the Asserted Patents. Should TeleSign put forth a damages analysis in this case that  
6 relies on or refers to any specific non-infringing alternatives or a design-around, Twilio intends  
7 to review such information and reserves the right to supplement these contentions.

8 Twilio contends that monthly or quarterly unit price, unit sales, revenue, and unit cost  
9 information (including detailed line items of what comprises unit costs) per customer from 2005  
10 to present for each Accused Product may be relevant to the analysis under this factor. To the  
11 extent that any Accused Products were modified and/or updated over time, Twilio contends the  
12 same information for predecessor products may be relevant to this analysis as well. Further,  
13 monthly or quarterly profitability (e.g., revenue; costs of goods sold (COGS); selling, general,  
14 and administrative expenses (SG&A); and research and development expenses (R&D), etc.) and  
15 other financial information related to each Accused Product and its predecessors from 2005 to  
16 present may be relevant to this analysis. Further, Twilio contends that information concerning  
17 TeleSign's incremental margins on the Accused Products may be relevant to the analysis under  
18 this factor. For example, Twilio contends that TeleSign's incremental margins on the Accused  
19 Products increase with each message that is sent. Further, technical specifications and features  
20 for each Accused Product and any predecessor may be relevant to this analysis.

21 For example, TeleSign produced limited information relating to revenues, costs, and  
22 profitability of the Accused Products at TLS\_00008665. However, this information is  
23 incomplete at least because it does not include any data earlier than January 2012. Twilio  
24 contends that TeleSign switched from a SOAP architecture to a REST architecture for the  
25 Accused Products on or around February 2012. Thus, financial information that pre-dates this  
26 switch would enable Twilio to analyze how the change in technology affected TeleSign's  
27 financials. Further, the revenue, cost, and profit data is not broken down by line item or broken  
28

1 down on a per-unit basis. For example, Twilio contends that per-unit costs and per-unit  
2 revenues may be relevant to the analysis under this factor.

3 Further, Twilio contends that information concerning quantities of each Accused Product  
4 sold by TeleSign over time may be relevant to this analysis. For example, the number of  
5 messages sent per month for each Accused Product and the number of subscribers per month for  
6 each Accused Product may be relevant to this analysis. Twilio has not located such information  
7 in TeleSign's document production, and such information is solely in the possession of  
8 TeleSign.

9 Based on Twilio's initial investigation to date, it appears that TeleSign has a number of  
10 partnerships with third parties, including Comodo; [REDACTED] Deepnet Security; [REDACTED]; RSA;  
11 [REDACTED] Mobile Mentor; [REDACTED] [REDACTED] BahavioSec; and Orange. Twilio is not in  
12 possession of further information regarding these partnerships, including any licensing or  
13 technology transfer / sharing agreements that may have been executed, services / products  
14 received or provided, and any related financial provisions. This information may affect the  
15 analysis of a reasonable royalty under this factor.

16 Twilio contends that additional information concerning TeleSign's non-accused products  
17 may be relevant to this analysis. For example, information concerning the operation,  
18 functionality, marketing, target customers, revenue, costs, profits, and usage metrics for non-  
19 accused products from 2005 to present may be relevant to an analysis of the contribution of the  
20 patented technology of the Asserted Patents. Per-unit financial information from 2005 to  
21 present such as revenues, costs, and profits, on a line-item basis, for non-accused products may  
22 be relevant to this analysis. Further, business plans, marketing plans, and target customer plans  
23 or analyses for both the accused and non-accused products may be relevant to the analysis under  
24 this factor. TeleSign is in sole possession of information relating to its sales and marketing  
25 strategies and information relating to cross-selling of its products.

26 Further, documents relating to Twilio's own profitability and pricing relating to its  
27 products that practice the claims may be relevant under this analysis. Those documents will be  
28 forthcoming according to the discovery schedule. In particular, because TeleSign took a lengthy

1 extension on written discovery, Twilio too has an extension and its financial production has not  
 2 become due yet. Twilio is in the process of searching its relevant financials and its related  
 3 document production will be forthcoming.

4 Twilio contends the following documents may be relevant to the analysis under this  
 5 factor: TLS\_00020785, TLS\_00020895, TLS\_00002108, TLS\_00005587, TLS\_00005588,  
 6 TLS\_00000927, TLS\_00008508, TLS\_00008511, TLS\_00008516, TLS\_00013138,  
 7 TLS\_00013143, TLS\_00013377, TLS\_00015243, TLS\_00015311, TLS\_00015316,  
 8 TLS\_00015323, TLS\_00015326, TLS\_00015366, TLS\_00015375, TLS\_00015380,  
 9 TLS\_00018193, TLS\_00002018, TLS\_00002106, TLS\_00005288, TLS\_00005542,  
 10 TLS\_00005552, TLS\_00005555, TLS\_00005561, TLS\_00005565, TLS\_00005576,  
 11 TLS\_00005589, TLS\_00008681, TLS\_00009119, TLS\_00013143, TLS\_00015243,  
 12 TLS\_00015344, TLS\_00015588, TLS\_00015607, TLS\_00015616, TLS\_00015623,  
 13 TLS\_00018193, TLS\_00020567, TLS\_00004350, TLS\_00004464, TLS\_00004465,  
 14 TLS\_00004469, TLS\_00004477, TLS\_00004499, TLS\_00004503, TLS\_00004507,  
 15 TLS\_00004512, TLS\_00004513, TLS\_00004523, TLS\_00004527, TLS\_00004529,  
 16 TLS\_00004540, TLS\_00012760, TLS\_00012766, TLS\_00014955, TLS\_00015034,  
 17 TLS\_00015050, TLS\_00004253, TLS\_00004266, TLS\_00004583, TLS\_00004608,  
 18 TLS\_00008690, TLS\_00008695, TLS\_00008697, TLS\_00008699, TLS\_00008704,  
 19 TLS\_00008740, TLS\_00015126, TLS\_00015133, TLS\_00015202, TLS\_00004627,  
 20 TLS\_00008659, TLS\_00008665, TLS\_00013055, TLS\_00014324, TLS\_00014954,  
 21 TLS\_00015626, TLS\_00015627, TLS\_00015598, TLS\_00012799, TLS\_00012805,  
 22 TLS\_00012871, TLS\_00012931, TLS\_00012993, TLS\_00013489, TLS\_00013921,  
 23 TLS\_0002141, TLS\_00000871, TLS\_00000915, TLS\_00000917, TLS\_00001080,  
 24 TLS\_00001084, TLS\_00001086, TLS\_00001112.

25 Twilio reserves its right to amend and supplement these contentions based on any  
 26 information obtained during discovery and expert opinions relating to this factor.

**K. Georgia-Pacific Factor 11: “The extent to which the infringer has made use of the invention; and any evidence probative of the value of such use”**

The extent of use of the patented inventions is relevant to this analysis. For example, an invention with more frequent use would command a higher royalty, all else equal, than an invention with less frequent use. Based on information currently known to Twilio, TeleSign made and makes significant use of the patented inventions. However, Twilio has not been able to locate in TeleSign’s productions information concerning the extent of use or quantities sold of the Accused Products. For example, usage metrics including the number of uses of each Accused Product on a monthly basis (i.e., number of messages sent per month) may be relevant to this analysis. Further, information concerning the number of subscribers for each Accused Product, on a monthly basis, may be relevant to this analysis. Further, Twilio contends that information concerning TeleSign’s incremental margins on the Accused Products may be relevant to the analysis under this factor. For example, Twilio contends that TeleSign’s incremental margins on the Accused Products increase with each message that is sent. Such information is solely within the possession of TeleSign.

However, TeleSign’s production does not include per-unit revenue, cost, or profitability data; nor does it include usage metrics such as number of uses of each Accused Product per month. Twilio contends that this information, for example, may be relevant to the proper analysis of damages under this factor.

Twilio contends that monthly or quarterly unit price, unit sales, revenue, and unit cost information (including detailed line items of what comprises unit costs) per customer from 2005 to present for each Accused Product may be relevant to the analysis under this factor. To the extent that any Accused Products were modified and/or updated over time, Twilio contends the same information for predecessor products may be relevant to this analysis as well. Further, monthly or quarterly profitability (e.g., revenue; costs of goods sold (COGS); selling, general,

1 and administrative expenses (SG&A); and research and development expenses (R&D), etc.) and  
2 other financial information related to each Accused Product and its predecessors from 2005 to  
3 present may be relevant to this analysis. Further, technical specifications and features for each  
4 Accused Product and any predecessor may be relevant to this analysis.

5 For example, TeleSign produced limited information relating to revenues, costs, and  
6 profitability of the Accused Products at TLS\_00008665. However, this information is  
7 incomplete at least because it does not include any data earlier than January 2012. TeleSign  
8 switched from a SOAP architecture to a REST architecture for the Accused Products on or  
9 around February 2012. Thus, financial information that pre-dates this switch would enable  
10 Twilio to analyze how the change in technology affected TeleSign's financials. Further, the  
11 revenue, cost, and profit data is not broken down by line item or broken down on a per-unit  
12 basis. For example, Twilio contends that per-unit costs and per-unit revenues may be relevant to  
13 the analysis under this factor.

14 [REDACTED]  
15 [REDACTED] [REDACTED]  
16 [REDACTED]  
17 [REDACTED]  
18 [REDACTED]  
19 [REDACTED] TLS\_00012993. Information, data, and  
20 presentations made to the third-party financial advisors who performed such valuations may be  
21 relevant to the analysis under this factor.

1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 Further, BICS announced its purchase of TeleSign Corporation in April 25, 2017 for  
11 \$230 million. Information concerning this transaction may be relevant to the analysis under this  
12 factor. For example, any materials or information shared with investors or potential buyers,  
13 including but not limited to BICS, may be relevant to this analysis. Further, any materials and  
14 data regarding the valuation of TeleSign, including materials and data regarding the valuation of  
15 TeleSign's intellectual property and valuation of the Accused and non-accused Products may be  
16 relevant to this analysis. This includes any opinion on fair value provided by third-party  
17 financial advisors. Further, information regarding which assets, including any IP, that was  
18 transferred from TeleSign to BICS may be relevant to the analysis under this factor. Further,  
19 materials concerning the objective of the acquisition for both parties and any potential parties  
20 may be relevant to the analysis under this factor. Further, any analyst reports relating to this  
21 acquisition may be relevant to this analysis. Information relating to TeleSign's due diligence in  
22 connection with this transaction may also be relevant to the analysis under this factor. Twilio  
23 requested "all documents relating to You attempting to sell TeleSign or otherwise seeking a  
24 merger, acquisition or partnership" in RFP No. 15. See Exhibit C. Based on information  
25 currently available to Twilio, on a May 5, 2017 earnings call, the CEO of BICS stated "TeleSign  
26 is a market leader in what is called 2factor authentication, which is digital platform user  
27 authentication by SMS. And 20 out of the top 25 Internet companies are customers of TeleSign  
28 to improve the security of their user accounts. So as such, TeleSign generates billions of SMS to

1 all mobile network operators around the world, while we are physically connected to all these  
2 operators to which we are providing voice messaging and roaming services.”

3 Based on Twilio’s initial investigation to date, it appears that TeleSign has a number of  
4 partnerships with third parties, including Comodo; [REDACTED] Deepnet Security; [REDACTED] RSA;  
5 [REDACTED] Mobile Mentor; [REDACTED] [REDACTED] BahavioSec; and Orange. Twilio is not in  
6 possession of further information regarding these partnerships, including any licensing or  
7 technology transfer / sharing agreements that may have been executed, services / products  
8 received or provided, and any related financial provisions. This information may affect the  
9 analysis of a reasonable royalty under this factor.

10 Further, TeleSign recently launched self-service access to its communications APIs. *See*  
11 [https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-](https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-communications-apis/)  
12 [communications-apis/](https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-communications-apis/). Twilio contends that information relating to this new service, including  
13 marketing and promotion materials, information relating to any cross-selling or synergistic  
14 efforts among TeleSign products, usage metrics, actual and projected per-unit revenue, cost, and  
15 profit information, projected and actual quantities sold (e.g., number of messages per month),  
16 and analyses concerning target market and target customers may be relevant to the analysis  
17 under this factor.

18 Twilio contends that additional information concerning TeleSign’s non-accused products  
19 may be relevant to this analysis. For example, information concerning the operation,  
20 functionality, marketing, target customers, revenue, costs, profits, and usage metrics for non-  
21 accused products from 2005 to present may be relevant to an analysis of the contribution of the  
22 patented technology of the Asserted Patents. Per-unit financial information from 2005 to  
23 present such as revenues, costs, and profits, on a line-item basis, for non-accused products may  
24 be relevant to this analysis. Further, business plans, marketing plans, and target customer plans  
25 or analyses for both the accused and non-accused products may be relevant to the analysis under  
26 this factor. TeleSign is in sole possession of information relating to its sales and marketing  
27 strategies and information relating to cross-selling of its products.  
28

1 Based on Twilio's initial investigation to date, TeleSign introduced REST APIs to  
2 substitute its previous SOAP-based architecture in February 2012. *See, e.g.,*  
3 <https://www.telesign.com/blog/post/restful-apis/>. TeleSign stated in a blog post as of that date  
4 that "Today all of our customers access our APIs via SOAP and we've definitely heard that  
5 folks want us to provide our APIs in an alternative form since almost all Web Services today use  
6 REST." Information concerning TeleSign's analysis of the switch from SOAP to REST, the  
7 factors involved in that decision, any financial analyses or presentations concerning that  
8 decision, any customer or developer feedback to TeleSign concerning the SOAP interface and  
9 any requests to switch to REST or discussions concerning a potential switch may be relevant to  
10 the analysis under this factor. Further, any information concerning the impact of this switch on  
11 TeleSign's usage metrics for the Accused Products, including number of message and number of  
12 subscribers per month for each Accused Product before and after the transition, per unit revenue,  
13 per unit cost and profitability data before and after the transition may be relevant to the analysis  
14 under this factor. Further, any customer / developer feedback concerning the switch may be  
15 relevant to the analysis under this factor. Further, any projections or forecasts concerning how  
16 the switch from SOAP to REST would affect TeleSign, sales, costs, and profitability of the  
17 Accused Products may be relevant to the analysis under this factor.

18 REST provides several benefits over SOAP. For example, SOAP was designed to  
19 support a wide array of applications. As such, its flexibility creates complexity, overhead, and  
20 user unfriendliness in its design. SOAP is also limited to the use of XML. As a result, REST is  
21 not as flexible as SOAP and is not appropriate for all applications. However, when REST can  
22 be used and is appropriate, it provides a number of benefits over SOAP.

23 Further, REST provides its own form of flexibility. For example, while SOAP is based  
24 on a number of standards and is a protocol requiring strict adherence in order to avoid errors,  
25 REST is more of an architecture that provides flexibility in how the API is designed. REST  
26 requests can be encoded in URIs that are sent to servers as stateless requests--similar to how  
27 HTTP requests are made.



1 SOAP requests are not encoded into the URI but must be delivered as objects in the body  
2 of a request. As long as the request can be made into a URI and kept stateless, REST can be  
3 used to avoid the complexity of specifying a SOAP object format.

4 TeleSign recognized the benefits of REST over SOAP. For example, TeleSign identified  
5 in February 2012 that:

6  
7 There are a few advantages to this method: (1) The secret information is  
8 never passed between each party during the transaction; (2) Because each  
9 party has a copy of the secret key, the sender and recipient are  
10 independently able to create the “Authorization” token. As long as the  
11 token is created in the same way on each side the authorization of the  
12 transaction will succeed; (3) Because the authorization token contains a  
13 hash of not only the API Key but the transaction as well, the recipient can  
14 be assured that both the transaction is properly authenticated and that it  
15 hasn’t been modified in transit.

16 See <https://www.telesign.com/blog/post/restful-apis/>.

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*Id.* at 9328.

Further, TeleSign recently launched a new self-service access to its communications  
APIs. The self-service feature is marketed by TeleSign as being user-friendly and not complex.  
The user-friendliness and lack of complexity is enabled by the REST architecture.

Twilio contends the following documents may be relevant to the analysis under this  
factor: TLS\_00004627, TLS\_00008659, TLS\_00008665, TLS\_00013055, TLS\_00014324,  
TLS\_00014954, TLS\_00015626, TLS\_00015627, TLS\_00015598, TLS\_00012799,  
TLS\_00012805, TLS\_00012871, TLS\_00012931, TLS\_00012993, TLS\_00013489,  
TLS\_00013921, TLS\_0002141.

Twilio reserves its right to amend and supplement these contentions based on any  
information obtained during discovery and expert opinions relating to this factor.

L. ***Georgia-Pacific Factor 12: “The portion of profit or of the selling price customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions”***

Based on the information Twilio currently possesses, Twilio is unaware of any customary apportionment of profit in this industry. However, discovery is in the early stages, and information regarding a customary apportionment of profit may be acquired during discovery. For example, third party license agreements, industry surveys / studies, and related information may be available during discovery. Further, TeleSign may produce license or technology sharing / transfer agreements during discovery that relate to the relevant industry to the Asserted Patents. This information may be instructive as to the various forms or structures of royalty payments that have been utilized in the industry relevant to the Asserted Patents as well as any apportionment of profit that may be customary in the industry.

Twilio contends that monthly or quarterly unit price, unit sales, revenue, and unit cost information (including detailed line items of what comprises unit costs) per customer from 2005 to present for each Accused Product may be relevant to the analysis under this factor. To the extent that any Accused Products were modified and/or updated over time, Twilio contends the same information for predecessor products may be relevant to this analysis as well. Further, monthly or quarterly profitability (e.g., revenue; costs of goods sold (COGS); selling, general, and administrative expenses (SG&A); and research and development expenses (R&D), etc.) and other financial information related to each Accused Product and its predecessors from 2005 to present may be relevant to this analysis. Further, Twilio contends that information concerning TeleSign’s incremental margins on the Accused Products may be relevant to the analysis under this factor. For example, Twilio contends that TeleSign’s incremental margins on the Accused Products increase with each message that is sent. Further, technical specifications and features for each Accused Product and any predecessor may be relevant to this analysis.

For example, TeleSign produced limited information relating to revenues, costs, and profitability of the Accused Products at TLS\_00008665. However, this information is incomplete at least because it does not include any data earlier than January 2012. Twilio contends that TeleSign switched from a SOAP architecture to a REST architecture for the

1 Accused Products on or around February 2012. Thus, financial information that pre-dates this  
2 switch would enable Twilio to analyze how the change in technology affected TeleSign's  
3 financials. Further, the revenue, cost, and profit data is not broken down by line item or broken  
4 down on a per-unit basis. For example, Twilio contends that per-unit costs and per-unit  
5 revenues may be relevant to the analysis under this factor.

6 Further, Twilio contends that information concerning quantities of each Accused Product  
7 sold by TeleSign over time may be relevant to this analysis. For example, the number of  
8 messages sent per month for each Accused Product and the number of subscribers per month for  
9 each Accused Product may be relevant to this analysis. Twilio has not located such information  
10 in TeleSign's document production, and such information is solely in the possession of  
11 TeleSign.

12 Further, TeleSign recently launched self-service access to its communications APIs. *See*  
13 [https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-](https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-communications-apis/)  
14 [communications-apis/](https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-communications-apis/). Twilio contends that information relating to this new service, including  
15 marketing and promotion materials, information relating to any cross-selling or synergistic  
16 efforts among TeleSign products, usage metrics, actual and projected per-unit revenue, cost, and  
17 profit information, projected and actual quantities sold (e.g., number of messages per month),  
18 and analyses concerning target market and target customers may be relevant to the analysis  
19 under this factor.

20 Twilio contends that additional information concerning TeleSign's non-accused products  
21 may be relevant to this analysis. For example, information concerning the operation,  
22 functionality, marketing, target customers, revenue, costs, profits, and usage metrics for non-  
23 accused products from 2005 to present may be relevant to an analysis of the contribution of the  
24 patented technology of the Asserted Patents. Per-unit financial information such as revenues,  
25 costs, and profits, on a line-item basis, from 2005 to present for non-accused products may be  
26 relevant to this analysis. Further, business plans, marketing plans, and target customer plans or  
27 analyses for both the accused and non-accused products may be relevant to the analysis under  
28

1 this factor. TeleSign is in sole possession of information relating to its sales and marketing  
2 strategies and information relating to cross-selling of its products.

3 Based on Twilio's initial investigation to date, it appears that TeleSign has a number of  
4 partnerships with third parties, including Comodo; [REDACTED] Deepnet Security; [REDACTED] RSA;  
5 [REDACTED] Mobile Mentor; [REDACTED] [REDACTED]; BahavioSec; and Orange. Twilio is not in  
6 possession of further information regarding these partnerships, including any licensing or  
7 technology transfer / sharing agreements that may have been executed, services / products  
8 received or provided, and any related financial provisions. This information may affect the  
9 analysis of a reasonable royalty under this factor.

10 Further, documents relating to Twilio's own profitability and pricing relating to its  
11 products that practice the claims may be relevant under this analysis. Those documents will be  
12 forthcoming according to the discovery schedule. In particular, because TeleSign took a lengthy  
13 extension on written discovery, Twilio too has an extension and its financial production has not  
14 become due yet. Twilio is in the process of searching its relevant financials and its related  
15 document production will be forthcoming.

16 Twilio contends the following documents may be relevant to the analysis under this  
17 factor: TLS\_00015598, TLS\_00020785, TLS\_00020895, TLS\_00002108, TLS\_00005587,  
18 TLS\_00005588, TLS\_00000927, TLS\_00008508, TLS\_00008511, TLS\_00008516,  
19 TLS\_00013138, TLS\_00013143, TLS\_00013377, TLS\_00015243, TLS\_00015311,  
20 TLS\_00015316, TLS\_00015323, TLS\_00015326, TLS\_00015366, TLS\_00015375,  
21 TLS\_00015380, TLS\_00018193, TLS\_00002018, TLS\_00002106, TLS\_00005288,  
22 TLS\_00005542, TLS\_00005552, TLS\_00005555, TLS\_00005561, TLS\_00005565,  
23 TLS\_00005576, TLS\_00005589, TLS\_00008681, TLS\_00009119, TLS\_00013143,  
24 TLS\_00015243, TLS\_00015344, TLS\_00015588, TLS\_00015607, TLS\_00015616,  
25 TLS\_00015623, TLS\_00018193, TLS\_00020567, TLS\_00004350, TLS\_00004464,  
26 TLS\_00004465, TLS\_00004469, TLS\_00004477, TLS\_00004499, TLS\_00004503,  
27 TLS\_00004507, TLS\_00004512, TLS\_00004513, TLS\_00004523, TLS\_00004527,  
28 TLS\_00004529, TLS\_00004540, TLS\_00012760, TLS\_00012766, TLS\_00014955,

1 TLS\_00015034, TLS\_00015050, TLS\_00004253, TLS\_00004266, TLS\_00004583,  
 2 TLS\_00004608, TLS\_00008690, TLS\_00008695, TLS\_00008697, TLS\_00008699,  
 3 TLS\_00008704, TLS\_00008740, TLS\_00015126, TLS\_00015133, TLS\_00015202,  
 4 TLS\_00004627, TLS\_00008659, TLS\_00008665, TLS\_00013055, TLS\_00014324,  
 5 TLS\_00014954, TLS\_00015626, TLS\_00015627, TLS\_00015598, TLS\_00012799,  
 6 TLS\_00012805, TLS\_00012871, TLS\_00012931, TLS\_00012993, TLS\_00013489,  
 7 TLS\_00013921, TLS\_0002141.

8 Twilio reserves its right to amend and supplement these contentions based on any  
 9 information obtained during discovery and expert opinions relating to this factor.

10 **M. *Georgia-Pacific Factor 13: “The portion of the realizable profit that should be***  
 11 ***credited to the invention as distinguished from non-patented elements, the***  
 12 ***manufacturing process, business risks, or significant features or improvements***  
 13 ***added by the infringer”***

14 TeleSign is in possession of information relating to any non-patented elements of the  
 15 Accused Products, the manufacturing process, business risks, or significant features or  
 16 improvements added by TeleSign to the Accused Products. This information may be relevant to  
 17 Twilio’s analysis of an appropriate reasonable royalty under this factor.

18 Twilio is currently unaware of any acceptable, non-infringing alternatives or a design-  
 19 around available to TeleSign which would provide the same or similar benefits of subject matter  
 20 claimed in the Asserted Patents. Should TeleSign put forth a damages analysis in this case that  
 21 relies on or refers to any specific non-infringing alternatives or a design-around, Twilio intends  
 22 to review such information and reserves the right to supplement these contentions.

23 Twilio contends that monthly or quarterly unit price, unit sales, revenue, and unit cost  
 24 information (including detailed line items of what comprises unit costs) per customer from 2005  
 25 to present for each Accused Product may be relevant to the analysis under this factor. To the  
 26 extent that any Accused Products were modified and/or updated over time, Twilio contends the  
 27 same information for predecessor products may be relevant to this analysis as well. Further,  
 28 monthly or quarterly profitability (e.g., revenue; costs of goods sold (COGS); selling, general,

1 and administrative expenses (SG&A); and research and development expenses (R&D), etc.) and  
2 other financial information related to each Accused Product and its predecessors from 2005 to  
3 present may be relevant to this analysis. Further, Twilio contends that information concerning  
4 TeleSign's incremental margins on the Accused Products may be relevant to the analysis under  
5 this factor. For example, Twilio contends that TeleSign's incremental margins on the Accused  
6 Products increase with each message that is sent. Further, technical specifications and features  
7 for each Accused Product and any predecessor may be relevant to this analysis.

8 For example, TeleSign produced limited information relating to revenues, costs, and  
9 profitability of the Accused Products at TLS\_00008665. However, this information is  
10 incomplete at least because it does not include any data earlier than January 2012. Twilio  
11 contends that TeleSign switched from a SOAP architecture to a REST architecture for the  
12 Accused Products on or around February 2012. Thus, financial information that pre-dates this  
13 switch would enable Twilio to analyze how the change in technology affected TeleSign's  
14 financials. Further, the revenue, cost, and profit data is not broken down by line item or broken  
15 down on a per-unit basis. For example, Twilio contends that per-unit costs, per-unit revenues,  
16 and per-unit profits may be relevant to the analysis under this factor.

17 Further, Twilio contends that information concerning quantities of each Accused Product  
18 sold by TeleSign over time may be relevant to this analysis. For example, the number of  
19 messages sent per month for each Accused Product and the number of subscribers per month for  
20 each Accused Product may be relevant to this analysis. Twilio has not located such information  
21 in TeleSign's document production, and such information is solely in the possession of  
22 TeleSign.

23 Further, TeleSign recently launched self-service access to its communications APIs. *See*  
24 [https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-](https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-communications-apis/)  
25 [communications-apis/](https://www.telesign.com/resources/press-releases/telesign-launches-self-service-access-communications-apis/). Twilio contends that information relating to this new service, including  
26 marketing and promotion materials, information relating to any cross-selling or synergistic  
27 efforts among TeleSign products, usage metrics, actual and projected per-unit revenue, cost, and  
28 profit information, projected and actual quantities sold (e.g., number of messages per month),

1 and analyses concerning target market and target customers may be relevant to the analysis  
2 under this factor.

3 Based on Twilio's initial investigation to date, it appears that TeleSign has a number of  
4 partnerships with third parties, including Comodo; [REDACTED] Deepnet Security; [REDACTED] RSA;  
5 [REDACTED] Mobile Mentor; [REDACTED]; [REDACTED] BahavioSec; and Orange. Twilio is not in  
6 possession of further information regarding these partnerships, including any licensing or  
7 technology transfer / sharing agreements that may have been executed, services / products  
8 received or provided, and any related financial provisions. This information may affect the  
9 analysis of a reasonable royalty under this factor.

10 Twilio contends that additional information concerning TeleSign's non-accused products  
11 may be relevant to this analysis. For example, information concerning the operation,  
12 functionality, marketing, target customers, revenue, costs, profits, and usage metrics for non-  
13 accused products from 2005 to present may be relevant to an analysis of the contribution of the  
14 patented technology of the Asserted Patents. Per-unit financial information such as revenues,  
15 costs, and profits, on a line-item basis, from 2005 to present for non-accused products may be  
16 relevant to this analysis. Further, business plans, marketing plans, and target customer plans or  
17 analyses for both the accused and non-accused products may be relevant to the analysis under  
18 this factor. TeleSign is in sole possession of information relating to its sales and marketing  
19 strategies and information relating to cross-selling of its products.

20 Twilio contends the following documents may be relevant to the analysis under this  
21 factor: TLS\_00002108, TLS\_00005587, TLS\_00005588, TLS\_00000927, TLS\_00008508,  
22 TLS\_00008511, TLS\_00008516, TLS\_00013138, TLS\_00013143, TLS\_00013377,  
23 TLS\_00015243, TLS\_00015311, TLS\_00015316, TLS\_00015323, TLS\_00015326,  
24 TLS\_00015366, TLS\_00015375, TLS\_00015380, TLS\_00018193, TLS\_00002018,  
25 TLS\_00002106, TLS\_00005288, TLS\_00005542, TLS\_00005552, TLS\_00005555,  
26 TLS\_00005561, TLS\_00005565, TLS\_00005576, TLS\_00005589, TLS\_00008681,  
27 TLS\_00009119, TLS\_00013143, TLS\_00015243, TLS\_00015344, TLS\_00015588,  
28 TLS\_00015607, TLS\_00015616, TLS\_00015623, TLS\_00018193, TLS\_00020567,

1 TLS\_00004350, TLS\_00004464, TLS\_00004465, TLS\_00004469, TLS\_00004477,  
 2 TLS\_00004499, TLS\_00004503, TLS\_00004507, TLS\_00004512, TLS\_00004513,  
 3 TLS\_00004523, TLS\_00004527, TLS\_00004529, TLS\_00004540, TLS\_00012760,  
 4 TLS\_00012766, TLS\_00014955, TLS\_00015034, TLS\_00015050, TLS\_00004253,  
 5 TLS\_00004266, TLS\_00004583, TLS\_00004608, TLS\_00008690, TLS\_00008695,  
 6 TLS\_00008697, TLS\_00008699, TLS\_00008704, TLS\_00008740, TLS\_00015126,  
 7 TLS\_00015133, TLS\_00015202.

8 Twilio reserves its right to amend and supplement these contentions based on any  
 9 information obtained during discovery and expert opinions relating to this factor.

10 **N. *Georgia-Pacific Factor 14: “The opinion testimony of qualified experts”***

11  
 12 Fact discovery in this case is in its early stages. The Court has provided a schedule for  
 13 damages discovery, during which qualified experts will examine issues concerning the prior art  
 14 asserted in the case, the validity of the Asserted Patents, TeleSign’s infringement of the Asserted  
 15 Patents, the extent of TeleSign’s infringement, any available non-infringing alternatives and the  
 16 viability of such alternatives, and the proper amount of damages for TeleSign’s infringement of  
 17 the Asserted Patents, among other topics. Twilio reserves the right to supplement or amend  
 18 these contentions once qualified experts have provided their opinions regarding the Asserted  
 19 Patents, including the proper amount of damages for TeleSign’s infringement of those patents.  
 20 In particular, Twilio disclosed a damages expert to TeleSign in this case on June 9 and followed  
 21 up with counsel for TeleSign on June 15. *See* Exhibit D. Twilio asked for TeleSign’s consent to  
 22 disclose its confidential information to the expert on an expedited basis, but neither TeleSign’s  
 23 lead counsel nor anyone else on TeleSign’s counsel team would even respond to either of  
 24 Twilio’s emails. *Id.* Twilio contends that the opinion of its damages expert will be relevant to  
 25 this analysis and Twilio is unable to disclose any confidential TeleSign information to its expert  
 26 as of this date, due to TeleSign’s failure to even respond to Twilio’s email requests.



O. *Georgia-Pacific Factor 15: “The amount that a licensor (such as the patentee) and the licensee (such as the infringer) would have agreed upon (at the time infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee – who desires, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention – would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license”*

Twilio contends that the parties to the hypothetical negotiation would have considered all of the analyses outlined in these contentions and additional information that is uncovered during fact and expert discovery in this case. The parties would have acknowledged that the Asserted Patents were valid and infringed. The parties would have considered that the Asserted Patents are fundamental patents for bridging software developers and telephony communication. The parties would have acknowledged that the products and services covered by the Asserted Patents were commercially successful, profitable, and popular, and represent a significant improvement over prior art. The parties would have recognized that they are competitors.

Further, the parties would have had available to them information that is not currently available to Twilio at this stage in the case, as discussed above. For example, the parties would have had detailed information, at least dating back to 2005, on TeleSign’s pricing models, actual and projected quantities sold of the Accused and non-accused Products, and per-unit profitability, cost, revenue, and other financial information for the Accused and non-accused Products that will be the subject of fact and expert discovery. The parties would have had available monthly or quarterly unit price, unit sales, revenue, and unit cost information (including detailed line items of what comprises unit costs) per customer from 2005 to present for each Accused Product and non-accused product. Further, the parties would have had available monthly or quarterly profitability (e.g., revenue; costs of goods sold (COGS); selling, general, and administrative expenses (SG&A); and research and development expenses (R&D), etc.) and other financial information related to each Accused Product and non-accused product and their predecessors from 2005 to present. Further, the parties would have had available technical specifications and features for each Accused Product and any predecessor. Further, the parties would have had information concerning quantities of each Accused Product and non-

1 accused product sold by TeleSign over time. For example, the number of messages sent per  
2 month for each Accused Product and the number of subscribers per month for each Accused  
3 Product would have been available to the parties. Further, Twilio contends that information  
4 concerning TeleSign's incremental margins on the Accused Products may be relevant to the  
5 damages analysis and would have been available to the parties to the hypothetical negotiation.  
6 For example, Twilio contends that TeleSign's incremental margins on the Accused Products  
7 increase with each message that is sent. Further, information relating to TeleSign's new self-  
8 service access to its communication APIs, including marketing and promotion materials,  
9 information relating to any cross-selling or synergistic efforts among TeleSign products, usage  
10 metrics, actual and projected per-unit revenue, cost, and profit information, projected and actual  
11 quantities sold (e.g., number of messages per month), and analyses concerning target market and  
12 target customers may be relevant to the analysis of a reasonable royalty. Twilio has not located  
13 such information in TeleSign's document production, and such information is solely in the  
14 possession of TeleSign. Under the Book of Wisdom, the parties would have had detailed  
15 information about BICS' acquisition of TeleSign. Further, Twilio will consider the opinion  
16 testimony of qualified experts in forming its calculation of damages in this case.

17 Further, Twilio contends that the parties to the hypothetical negotiation would have had  
18 information concerning TeleSign's analysis of the switch from SOAP to REST, the factors  
19 involved in that decision, any financial analyses or presentations concerning that decision, any  
20 customer or developer feedback to TeleSign concerning the SOAP interface and any requests to  
21 switch to REST or discussions concerning a potential switch. Further, the parties would have  
22 had access to any information concerning the impact of this switch on TeleSign's usage metrics  
23 for the Accused and non-accused Products, including number of message and number of  
24 subscribers per month for each Accused Product before and after the transition, per unit revenue,  
25 per unit cost and profitability data before and after the transition. Further, the parties would  
26 have had access to any customer / developer feedback concerning the switch. Further, the  
27 parties would have had access to any projections or forecasts concerning how the switch from  
28

1 SOAP to REST would affect TeleSign, sales, costs, and profitability of the Accused Products.  
2 These topics will be the subject of discovery in this case.

3 Further, Twilio contends that the parties to the hypothetical negotiation would have had  
4 information at least dating back to 2005 concerning TeleSign's non-accused products, which  
5 may be relevant to the analysis of a reasonable royalty. For example, information dating back to  
6 2005 concerning the operation, functionality, marketing, target customers, revenue, costs,  
7 profits, and usage metrics for non-accused products may be relevant to an analysis of the  
8 contribution of the patented technology of the Asserted Patents. Per-unit financial information  
9 such as revenues, costs, and profits, on a line-item basis, for non-accused products may be  
10 relevant as well. Further, business plans, marketing plans, and target customer plans or analyses  
11 for both the accused and non-accused products may be relevant to the analysis of a reasonable  
12 royalty. TeleSign is in sole possession of information relating to its sales and marketing  
13 strategies and information relating to cross-selling of its products.

14 Based on the information currently available to Twilio, Twilio contends that the parties  
15 would have agreed to a royalty with a royalty base that is based on TeleSign's revenue for the  
16 Accused Products. Twilio contends that the Asserted Patents enable the core functionality for  
17 each of the TeleSign Accused Products. Based on information currently available to it, Twilio  
18 contends the royalty rate will be a percentage of revenue, or a royalty based on each use of the  
19 Accused Products. Based on information currently available to it, Twilio contends that TeleSign  
20 prices the Accused Services on a per-use basis. Therefore, Twilio contends that a reasonable  
21 royalty in this case may be calculated on a per-use basis. However, Twilio is not in possession  
22 of sufficient information to calculate an appropriate royalty rate or damages figure at this stage  
23 in the case.

BAKER BOTTS L.L.P.

1 Dated: June 20, 2017

Respectfully submitted,

2 BAKER BOTTS L.L.P.  
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4 WAYNE STACY  
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J.B. SCHILLER

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6 /s/ Michelle J. Eber

7 Michelle J. Eber

8 *Attorney for Twilio Inc.*  
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BAKER BOTTS L.L.P.

**CERTIFICATE OF SERVICE**

I hereby certify that all counsel of record who have consented to electronic service are being served with a copy of this document via electronic mail on June 20, 2017.

/s/ Michelle J. Eber  
Michelle J. Eber